

REMARKS

Claims 13-18 are currently pending. Claims 1-12 and 19-20 have been previously canceled without prejudice while claim 18 has been previously withdrawn.

Claims 13 and 15-17 stand rejected as being allegedly obvious over U.S. Patent No. 5,814,176 to Proulx. Claim 14 stands rejected as being allegedly unpatentable over Proulx in view of U.S. Patent No. 3,607,509 to Schrenk or in view of U.S. Patent No. 4,540,537 to Kamp.

The Office action asks, in response to the July 8, 2004, Response, “[w]hat physical and/or structural characteristics of the die enables and/or causes the beads to contact one another after exiting the respective die openings?” and then goes further to assert, “[n]evertheless, the beads of the prior art do contact one another after exiting the openings, as described above.”

Prior to addressing these two concerns, the undersigned offers the following as background. The claims of the present invention are generally directed to systems involving one or more die plates and one or more polymer sources. In each system there is a container or die maintaining a polymer under certain rheological conditions and a die plate with openings sized, shaped, and positioned so that polymer from the die source exiting the die openings of the system forms first and second beads that contact one another after exiting. Specific examples of some of the die systems of the claimed invention, including the polymers, rheological conditions, and die plate configurations, are provided in the specification. As is usually the case, these examples are not exhaustive of the scope of the present invention.

As to the Office action’s first question, the undersigned submits that the claimed systems provide more than adequate structural definition. Through their recitation of a die plate with openings sized, shaped, and positioned to allow a polymer under certain conditions to exit the openings of the die as two beads that contact one another, the claims provide for a system with certain patentable characteristics. This relationship in the claimed systems is not too unlike (if not analogous to) claiming a vessel made of a material that can confine a liquid

at the liquid's boiling point, a temperature that can range broadly but is, nevertheless, a definable characteristic once the liquid is known. Accordingly, the claimed systems of this application, which include relationships and sizes based upon rheological conditions, have language sufficient to patentably define and delineate the inventions.

As to the cited references, none of them provide a die plate that has been sized, shaped, and positioned to accommodate and account for a polymer under predetermined rheological conditions such that a first bead and a second bead of the polymer leaving openings in the die contact one another. Rather, in each of the cited references, only after the polymer has been drawn into a strand, does the polymer exiting the different openings of the die come in contact. Fig. 6 of U.S. patent 5,814,176, shows this as it illustrates a die with holes sized, shaped, and positioned such that polymer exiting from the die forms streams of polymer that do not contact one another while they are beads or are in a bead stage. Instead, the streams in this figure only come in contact after they have been drawn into strands. Comparatively, Fig. 1 of the application shows beads of polymer contacting one another after exiting a die. At least because this feature is not in the cited references, the undersigned submits that each of the claims is patentable over them.

CONCLUSION

In view of the above remarks, the Applicants respectfully assert that each of the pending claims are in condition for allowance and, therefore, request reconsideration and withdrawal of all outstanding rejections and allowance of all pending claims.

Respectfully submitted,

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